

splash!

quick facts on...

Automatic Line Flushing Devices

MARCH 2010

The South Florida Water Management District is a regional, governmental agency that oversees the water resources in the southern half of the state. It is the oldest and largest of the state's five water management districts.

Our Mission is to manage and protect water resources of the region by balancing and improving water quality, flood control, natural systems, and water supply.

The purpose of dead-end line flushing is to maintain water quality (desired chlorine residuals, low nitrates and nitrites, iron and color) within municipal distribution lines. Traditionally, this has been done by manually opening a fire hydrant approximately once a month to release large volumes of stale water from the system. While effective, this method is not efficient at conserving water.

An automatic line flushing device is able to achieve and maintain the desired water quality levels by releasing much lower volumes of water at a regulated frequency, usually on a daily basis. This method not only saves water but avoids the monthly labor costs associated with the manual method.

Water Savings

Water savings per device will vary based on site-specific characteristics such as distance from primary mains and number of users/customers in the area. Municipalities around South Florida have seen water savings from 50 to 90 percent when compared to manual flushing, reaching volumes in the tens of thousands to hundreds of thousands of gallons per year, per device.

Installation and Maintenance Costs

Costs vary according to individual site characteristics. Proper site preparation is critical to accommodate fast infiltration and reduce the possibility of creating stagnant puddles on the surrounding landscape and pavement. Cost estimates for site preparation are between \$2,500 and \$3,000 per site. Automatic line flushing devices can be purchased for approximately \$2,500, but some users have made their own devices for less than \$500 in material costs. Maintenance costs of the annual battery replacements are minimal.



Externalities

Site selection is critical, and truly stubborn sites may still require occasional high-velocity flushing through a fire hydrant. In addition, flushing frequencies and durations must be determined for each site individually based on measured water quality parameters.

After automatic line flushing devices are installed, proper signage should be placed nearby informing the public of the cost- and water-savings benefits.

How the South Florida Water Management District Can Help

Through the Water Savings Incentive Program (WaterSIP), the South Florida Water Management District provides matching funds up to \$50,000 to water providers and users for installing water-saving technologies, such as high-efficiency plumbing fixtures, rain and soil moisture sensors and fire hydrant flushing devices. Potential applicants include cities, public utilities and water providers, homeowners associations, schools, hospitals and industrial/commercial facilities. Individual residences are not eligible.

Since its inception in 2003, WaterSIP has allocated more than \$3.8 million to dozens of public and private entities across the District's 16 counties, resulting in an estimated water savings of more than 2.3 billion gallons per year. The program is based on cost-sharing. Entities seeking funding must be able to match at least 50 percent of the total costs for the project, either with matching funds or in-kind services. Up to 100 percent funding is available to Rural Economic Development Initiative communities.

Applications for WaterSIP are posted annually in February. Check the WaterSIP Web site for details on the program and application process. To learn more about WaterSIP, please contact Robert Wanvestraut, SFWMD Senior Conservation Officer, at rwinvest@sfwmd.gov or 561-682-2054. You may also visit us online at www.sfwmd.gov/watersip

Conventional Method



Auto-Flushing Device



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